

CHAPTER 23.15 LOCAL AMENDMENTS TO THE INTERNATIONAL BUILDING CODE 2006 EDITION

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23.15.100 Local amendments to the International Building Code, 2006 Edition

The amendments to the 2006 Edition of the International Building Code are listed hereafter by section. The last digits of the number (after the title and chapter digits) are the sections of the International Building Code to which the amendments refer.

23.15.103-115 Delete

Delete IBC sections 103 through 115; refer to the Anchorage Administrative Code.

23.15.202 "U" definitions

Add the following definition:

Usable space is space in a structure used for utility or equipment placement, storage, or building service, such as laundry and maintenance areas, and not defined as habitable space. Space used for ducts, water and sewer lines, and electrical wiring is not considered usable space.

23.15.305.2 Day care

Amend first paragraph to read as follows:

The use of a building or structure, or portion thereof, for educational, supervision or personal care services for more than five children older than 2-1/2 years of age, including children related to the staff, shall be classified as a Group E occupancy.

Add a new Exception to read as follows:

Exception: A child care facility located in a detached one-or two-family dwelling unit or townhouse (as defined in the International Residential Code) operating between the hours of 6:00 a.m. and 10:00 p.m. may accommodate a total of eight (8) children of any age without conforming to the requirements of this code for a group E occupancy. Such facilities shall comply with Anchorage Municipal Code Title 16.55, Child Care and Education Facilities – Centers and Homes. Smoke alarms, carbon monoxide detectors, and emergency escape and rescue openings shall be provided as required by the International Residential Code. Fire extinguishers shall be provided as required by the International Fire Code for a group E occupancy. Child care shall be limited to the basement, first and second stories. Child care facilities located in a basement or above the first story shall have access to not less than two means of egress separated by a minimum of ½ the maximum overall diagonal of the area served. One of the required means of egress may consist of a code compliant emergency escape and rescue opening. When child care facilities are located in a basement, at least one exit or emergency escape and rescue opening shall discharge directly to the exterior of the building at or near grade.

23.15.308.3 Group I-2

Amend the last sentence to read:

A facility, such as the above, with five (5) or fewer persons, including persons related to the staff, shall be classified as a Group R-3 or shall comply with the International Residential Code in accordance with Section 101.2.

23.15.308.3.1 Child care facility

Amend paragraph to read:

A child care facility providing care on a 24-hour basis to more than five (5) children 2-1/2 years of age or less, including children related to the staff, shall be classified as Group I-2.

23.15.308.5 Group I-4, day care facilities

Amend the second sentence to read:

A facility, such as the above, with five (5) or fewer persons, including persons related to the staff, shall be classified as a Group R-3 or shall comply with the International Residential Code in accordance with Section 101.2.

23.15.310.1 Residential Group R

Under R-3 occupancies delete:

Child care facilities that provide accommodations for five or fewer persons of any age for less than 24 hours.

Under R-3 Occupancies, add the following paragraph:

Child care facilities that provide accommodations for eight or fewer persons of any age for less than 24 hours, and/or five or fewer persons on a 24 hour basis. Child care facilities shall comply with AMC Title 16.55 Child Care and Education Facilities – Centers and Homes.

Under R-3 Occupancies, add the following paragraph:

A detached structure occupied as a single-family dwelling unit and containing not more than five guest rooms where guests pay rent in money, goods, labor, or otherwise shall be classified as a group R-3 occupancy, or shall comply with the International Residential Code. The total number of guests shall not exceed 50 square feet of net guest room floor area per occupant.

23.15.406.1.4 Separation

Amend by changing the reference “1/2-inch (12.7mm)” in the first sentence of item #1 to “5/8-inch Type X”.

23.15.421 Special security requirements for Group E buildings

Amend Chapter 4 by adding a new section as follows:

421.1 All Group E buildings with the lower floor level above grade and open on the sides shall be fenced around the building exterior or have skirting below the exterior walls to prevent unauthorized access.

23.15.422 Carbon monoxide detectors

Amend Chapter 4 by adding a new section 422 for carbon monoxide detectors, as follows:

422.1 Carbon monoxide detectors. The provisions of this section shall apply to Group I-1, R-2, R-3 R-4 occupancies and Group E daycare facilities. At least one (1) carbon monoxide detector shall be installed on each floor level. If a floor level contains bedrooms or sleeping rooms, at least one (1) detector shall be located in the immediate vicinity of the sleeping area, outside of the bedrooms/sleeping rooms. Carbon monoxide detectors shall be listed and installed in accordance with their listing. The alarm shall be clearly audible in all sleeping rooms with intervening doors closed.

Exceptions:

1. Carbon monoxide detectors are not required in dwelling units and structures with no combustion appliances and that do not have an attached garage.
2. Carbon monoxide detectors are not required in dwelling units and structures with only direct vent combustion appliances and that do not have an attached garage.
3. Carbon monoxide detectors are not required in Group I-1 and R-2 occupancies where all combustion equipment is located within a mechanical room separated from the rest of the building by construction capable of resisting the passage of smoke. If the structure has an attached parking garage, the garage shall be ventilated by an approved automatic carbon monoxide exhaust system designed in accordance with the mechanical code.

422.2 Interconnection. In new construction, all carbon monoxide detectors located within a single dwelling unit shall be interconnected in such a manner that actuation of one alarm shall activate all of the alarms within the individual dwelling unit.

422.3 Power source. In new construction, carbon monoxide detectors shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Wiring shall be permanent and without disconnecting switch other than those required

for overcurrent protection. In existing construction, carbon monoxide detectors shall be permitted to be battery powered or cord-and-plug type with battery backup.

23.15.501.3 Location on property

Amend chapter 5 by adding a new section to read as follows:

501.3 Location on property. Buildings shall adjoin or have access to a permanent public way or yard on not less than one side. Required yards shall be permanently maintained.

23.15.508.2 Table 508.2 incidental use areas

Amend Table 508.2 by changing the wording in the first block under the left column to read as follows:

Furnace rooms in E and R-1, R-2, and R-4 occupancies, regardless of Btu input, and furnace rooms of all other occupancies where the largest piece of equipment is over 400,000 Btu per hour input.

23.15.717.4.2 Groups R-1 and R-2

Amend Exception 3 to read as follows:

Exception 3: The attic space may be subdivided by draftstops into areas not exceeding 3000 square feet, or above every two dwelling units, whichever is smaller. When draftstopping is installed to separate every two dwelling units and each of these units is separated by a corridor, draftstopping is not required at the corridor wall. Where required, all subdivided areas shall be ventilated in accordance with Section 1203.2.

23.15.901 General

Add a new subsection to read as follows:

901.10 Damage protection. When exposed to probable vehicular damage due to proximity to alleys, driveways or parking areas, standpipes, post indicator valves and sprinkler system or standpipe system, connections, shall be protected in an approved manner.

23.15.903.2.2 Group E

Delete 903.2.2 and replace with the following:

An automatic sprinkler system shall be provided throughout all buildings that contain a Group E occupancy and for every portion of educational buildings below the level of exit discharge. The use of a fire wall does not establish a separate building for purposes of this section.

Exception: Buildings with Group E occupancies having an occupant load of 49 or less.

Daycare uses licensed to care for more than five (5) persons between the hours of 10 p.m. and 6 a.m. shall be equipped with an automatic sprinkler system designed and installed in accordance with subsection 903.3.1 or an approved equivalent system.

23.15.903.2.5 Group I

Delete exception and replace with:

Exception: Group I-1 facilities shall be protected throughout with an automatic sprinkler system designed and installed in accordance with 903.3.1.1 or 903.3.1.2. Existing group I-1 facilities with a previously approved and installed sprinkler systems designed in accordance with NFPA 13D and 903.3.1.3 shall be considered as in compliance.

23.15.903.2.7 Group R

Amend section by adding a new sentence to read as follows:

Any Group R-4 occupancy meeting the requirements for construction as defined for group R-3 or constructed in accordance with the IRC shall be sprinklered according to the requirements of 903.3.1.2.

23.15.903.2.10.1 Stories and basements without openings

Amend paragraph by deleting the words:

“where the floor area exceeds 1,500 square feet and”

23.15.903.2.12 Other hazards

Amend by adding the following subsection:

903.2.12.3 Pit sprinklers. Sprinklers shall be installed in the bottom of all new and existing elevator pits below the lowest projection of the elevator car but no higher than 24” from the bottom of the pit.

23.15.903.3.1.1.1 Exempt locations

Amend by adding the following:

5. **Machine rooms, machine spaces, control rooms, and control spaces.** Sprinkler heads, non-elevator related equipment, and unrelated piping, shall not be installed in new and shall be removed from existing elevator machine rooms, machine spaces, control rooms, and control spaces.

23.15.903.3.5 Water supplies

Add a new subsection as follows:

903.3.5.3 Hydraulic calculations. Sprinkler system design shall include a minimum 15% safety factor for flow at the supply.

23.15.903.4.1 Signals

Amend section by adding a new sentence to read as follows:

Central stations, remote stations or proprietary monitoring stations shall be located within the Municipality of Anchorage or shall have a local representative capable of responding to the location within sixty (60) minutes of notification.

23.15.907.2.1 Group A

Delete Exception.

23.15.907.2.2 Group B

Delete Exception.

23.15.907.2.4 Group F

Delete Exception.

23.15.907.2.7 Group M

Delete Exception #2.

23.15.907.2.8.1 Manual fire alarm system

Delete Exception #2.

23.15.907.2.9 Group R-2

Amend first paragraph to read as follows:

A manual fire alarm system and an automatic fire detection system with smoke detection in the public and common use areas shall be installed in Group R-2 occupancies where:

Amend by deleting exception # 2.

23.15.1003.1 Applicability

Amend section by adding an exception to read as follows:

Exception: Stairs or ladders used only to attend equipment are not considered elements of the means of egress system.

23.15.1008.1.8.6 Delayed egress locks

Revise item number 3 to read as follows:

3. The door locks shall have the capability of being unlocked by a signal from an approved location.

23.15.1019.1 Minimum number of exits

Amend section by adding an exception to read as follows:

Exception: Basements or the first level below the first story in all occupancies except R-3, used exclusively for the service of the building may have access to only one (1) exit. For any other use except R-3, the basement or first level below the first story shall have at least two (2) exits arranged in accordance with section 1015.2. For the purpose of this exception, storage rooms, laundry rooms, maintenance offices and similar uses shall not be considered as providing service to the building.

23.15.1026.1 General

Amend section 1026.1 by deleting all exceptions, except numbers 5 and 6.

23.15.1102 Definitions

Add the following definition:

Conventional industry tolerances means plus or minus ½ inch up to 36 inches and plus or minus 1 percent over 36 inches. Slopes may be plus or minus 1 percent.

23.15.1106 Parking and passenger loading facilities

Delete section 1106. Accessible parking and passenger loading facilities shall be provided in accordance with title 21.

23.15.1110.1 Signs

Delete Items 1 and 2 and replace with the following:

1. Accessible parking spaces required by title 21.
2. Accessible passenger loading zones required by title 21.

23.15.1203.2 Attic spaces

In the first sentence, add the words “insulation and” before the word “ceilings.”

Amend third sentence by changing “1 inch” to “1 ½ inch.”

Amend section by deleting the exception in its entirety.

Add a sentence at the end of the paragraph to read as follows:

Attic access shall not be located in a room containing bathing facilities.

23.15.1210.1 Floors

Amend paragraph to read as follows:

In other than dwelling units, toilet and bathing room floors shall have a smooth, non-porous, non-absorbent surface such as non-cushioned sheet vinyl, sealed concrete, or ceramic tile with sealed joints or other approved materials. Base shall be of similar materials, shall extend up the wall five inches (127 mm) minimum, and shall be sealed to the flooring and wall surface and allow differential movement without water penetration.

23.15.1210.2 Walls

Amend first paragraph to read as follows:

Walls within two feet (610 mm) of the front and sides of urinals and water closets shall have a smooth, non-porous, non-absorbent surface such as non-cushioned sheet vinyl, sealed concrete, ceramic tile with sealed joints, approved plastic panels, or other approved materials, to a height of four feet (1219 mm) minimum.

23.15.1211 Vapor retarders

Amend by adding a new section 1211 titled Vapor Retarders:

1211.1 Vapor retarders. All exterior wall, ceiling, and roof assemblies that enclose heated space and that are exposed to outdoor ambient temperatures shall be protected against water vapor transmission. Assemblies not otherwise of impermeable construction shall have installed, on the heated side of the insulation or air spaces, vapor retarders having a perm rating of 0.06 minimum in accordance with ASTM E96 (equivalent to 6 mil polyethylene).

23.15.1403.2 Weather protection

Amend third sentence by adding the words “vapor permeable” after “water-resistive.”

Amend third sentence by deleting the words “as described in section 1404.2.”

23.15.1404.2 Water-resistive barrier

Delete “a minimum of one layer of No. 15 asphalt felt, complying with ASTM D 226 for Type 1 felt or” from the first sentence.

23.15.1503 Weather protection

Add the following section:

1503.6 Protection from falling ice and snow. Buildings and structures shall be designed and constructed to minimize a hazardous accumulation of snow and ice on downward sloped eaves, roof surfaces and architectural projections. Where the accumulation of snow and/or ice creates a hazardous condition, the areas below the accumulation shall be protected from falling snow and/or ice. These areas include (but are not limited to) building entrances and exits, pedestrian areas, parking lots, driveways, public right-of-way, children’s play areas and utility locations for fire department connections, gas meters, and electrical meters, services and disconnects.

23.15.1507.2.2 Slope

Replace slopes of two units vertical in 12 units horizontal with three units vertical in 12 units horizontal.

23.15.1507.3.3 Underlayment

Replace paragraph with the following:

Underlayment shall be self-adhering polymer modified bitumen sheet complying with ASTM D 1970. The underlayment shall cover the entire roof surface.

23.15.1507.3.3.1 Low slope roofs

Delete section in its entirety.

23.15.1507.3.3.2 High slope roofs

Delete section in its entirety.

23.15. Table 1507.3.7 Clay and concrete tile attachment

Delete column titled "Roof slope up to < 3:12" in its entirety.

23.15.1604.4 Analysis

Add a paragraph after the last sentence:

Exterior walls and cladding of building and interior partitions shall accommodate gravity system deflections or be capable of resisting loads imposed by vertical movement of the gravity system.

23.15.1608.1 General

Add the following sentence:

Greenhouses heated year round may be designed for ten (10) psf roof live load without considering roof snow loads.

23.15.1608.3 Flat roof snow loads

Add the following section 1608.3:

1608.3 The minimum flat roof snow load, P_f , shall be forty (40) pounds per square foot.

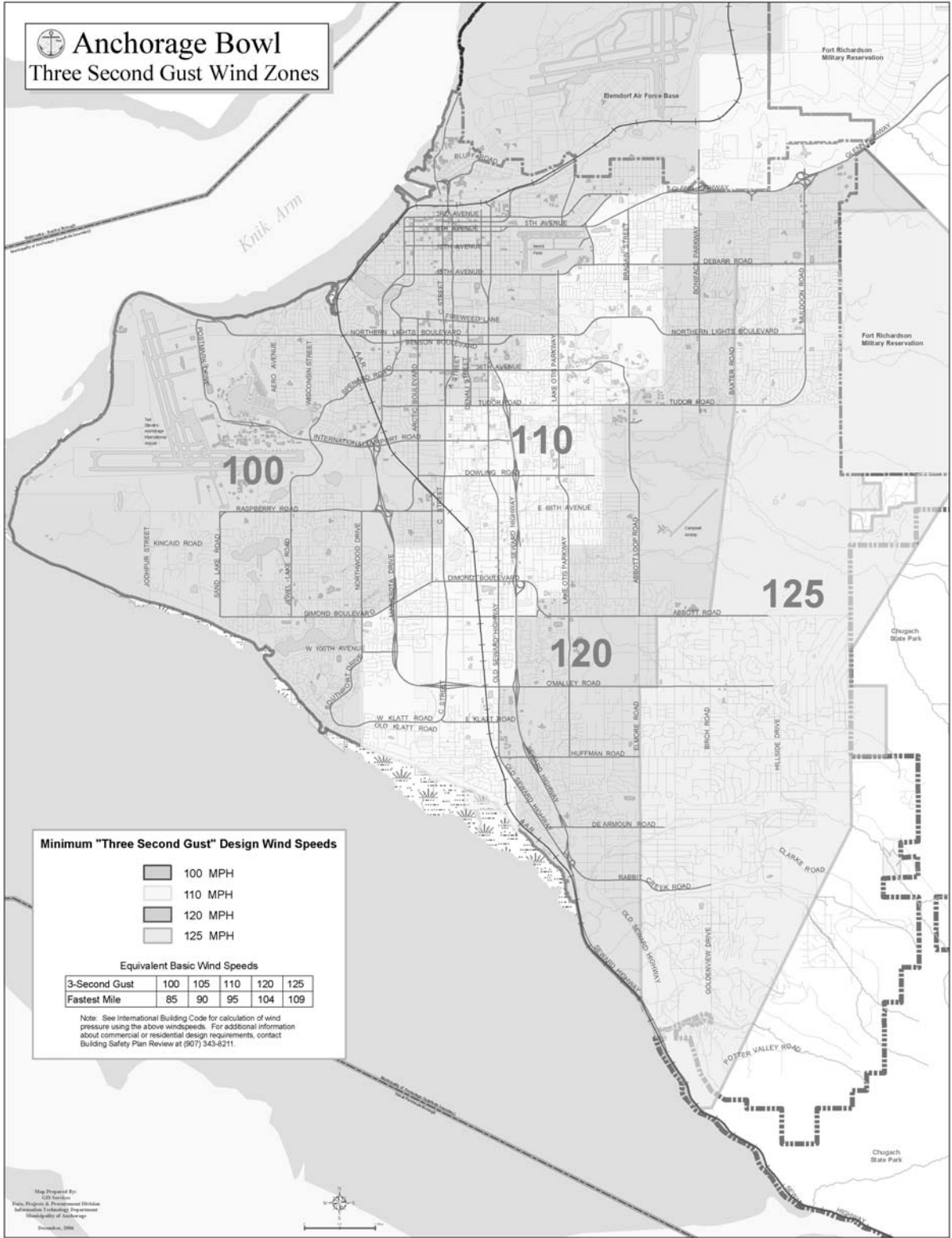
23.15.1609.3 Basic wind speed

Replace the first paragraph with the following:

The basic wind speed, in mph, for the determination of the wind loads shall be determined in accordance with the Anchorage "Three Second Gust" Wind Zone Map.

Replace Figure 1609 with the Anchorage "Three Second Gust" Wind Zone Map:

Anchorage Bowl
Three Second Gust Wind Zones



23.15.1609.4.3 Exposure categories

Add the following to the definition of “EXPOSURE D”:

Shoreline is defined as the high tide line (as indicated by the edge of vegetation on the most recent Municipality of Anchorage base aerial photograph set).

Unobstructed is defined as any site not sheltered from the shoreline by vegetation or other impediments at least four (4) feet high and covering at least sixty (60) percent of an area extending at least thirty (30) feet perpendicular to a line connecting the building to any point of the shoreline.

23.15.1613.1 Scope

Revise first sentence to also exclude ASCE 7 Appendix 11B.

23.15.1613.2 Definitions

Add the following definition:

SEISMICALLY-INDUCED GROUND FAILURE ZONES. For the various mapped ground failure zones see the *Anchorage Coastal Resource Atlas, Vol.1: The Anchorage Bowl*. for the purposes of these amendments the following numbers are assigned to the various mapped areas:

Zone 1 – “Lowest ground failure susceptibility.”

Zone 2 – “Moderately low ground failure susceptibility.”

Zone 3 – “Moderate ground failure susceptibility.”

Zone 4 – “High ground failure susceptibility.”

Zone 5 – “Very high ground failure susceptibility.”

23.15.1704.1 General

Amend by adding the following to the end of the paragraph:

Provided the Engineer of Record is a registered professional engineer in the State of Alaska, the Engineer of Record shall be deemed qualified to perform special inspections required under this chapter without further statements of qualifications or resumes to the Building Official.

23.15.1704.1.2 Report requirement

Delete the fourth and fifth sentences and insert the following:

All discrepancies shall be brought to the immediate attention of the contractor for correction, and shall be documented in a Special Inspection Report. If action is not taken immediately or within an agreed time frame to correct the nonconformance, the Special Inspector shall promptly inform the Engineer of Record and the building official, verbally and in writing through a Special Inspection Report. Discrepancies discovered by the Special Inspector after the

fact shall be reported to the Engineer of Record and the building official in writing.

Copies of inspection reports shall be available at the construction site for review by Municipality of Anchorage Building Safety Personnel.

23.15.1704.1.3 Pre-construction special inspection meeting

Add new subsection 1704.1.3 as follows:

A pre-construction special inspection meeting shall be required by the building official or designee, prior to the start of construction, when construction valuation meets or exceeds \$1 million. A pre-construction special inspection meeting shall also be required whenever special inspection is performed on an essential facility or when the building official believes such a meeting facilitates the inspection process of any project. Such meetings are tools used to address and coordinate the special inspection activities among all people involved in the construction project. The building official (or designee) shall chair these meetings.

23.15.1704.1.4 Special inspector pre-approval program

Add a new subsection 1704.1.4 to read as follows:

- A. Unless otherwise approved by the building official, special inspectors shall be pre-qualified and approved by the building official before performing special inspection activities on any project within the jurisdiction. Special inspectors shall obtain pre-approval for each category of inspection they wish to perform. Applicants for pre-approval as special inspectors shall submit an application describing documentable qualifications for each category of inspection(s) to be performed, with years of experience, project references, certifications where appropriate, and references with contact information. Once qualifications are accepted by the building official, an applicant special inspector shall be issued a unique special inspector number. Provisions may be made for pre-qualification of special inspector interns not meeting the basic requirements of a special inspector in a certain category, but who are supervised by a pre-qualified special inspector or design professional.
- B. Approval shall be by letter from the municipality and shall include a pocket or wallet card defining special inspector's information and the categories the special inspector has been pre-approved. Special inspectors shall carry the wallet card on their person when performing inspections and show the card upon request of building official's representative or designated design professional. Special inspector approvals shall be renewed every two (2) years by reapplication of the special inspector.

23.15.1704.1.4.1 Special inspector intern program

Add a new subsection 1704.1.4 to read as follows:

- A. The Special Inspection firm proposing to use an intern for part of their Special Inspection shall submit to the building official a written Special Inspector Intern Program for approval. The program shall define:
1. Minimum pre-qualifying experience required for the proposed intern to participate as a Special Inspector Intern. Minimum qualifications to begin the Special Inspector Program shall be defined by the building official.
 2. The Special Inspection Intern shall be supervised as described by the written Special Inspector Intern Program. Individuals designated as supervisors shall be pre-approved Special Inspectors in the discipline the Intern is training for. Special Inspection reports and documents shall be signed by the intern and countersigned by the supervisor prior to being submitted to the Contractor, the Engineer of Record, and the building official.
 3. Completion of Special Inspector Intern training in a particular category of inspection shall be demonstrated by application for pre-approval as a Special Inspector and acceptance by the building official.
 4. Should an Intern fail to perform, the building official may require additional training, additional supervision, or removal from the project.

23.15.1704.1.4.2 Approval suspension

Add a new subsection 1704.1.4.2 to read as follows:

The building official may suspend an individual's approval as a special inspector for a project where the special inspector demonstrates a lack of knowledge, neglects duties due to their own fault or falsifies documents. The special inspector shall be provided written notification and shall be afforded the opportunity by the building official to be heard. Decisions may be appealed to the Building Board of Appeals.

23.15.1704.1.4.3 Removal of pre-approved status

Add a new subsection 1704.1.4.3 to read as follows:

The building official may revoke or suspend an individual's pre-approval status when a special inspector neglects duties, demonstrates a lack of knowledge, falsifies documents or misrepresents qualifications. Pre-approved status may be reinstated on recommendation of the Special Inspector Peer Committee or after 365 days and upon submission of proof of additional training or certifications. The special inspector shall be provided written notification and shall be afforded the opportunity by the building official to be heard. Pre-approval status decisions may be appealed to the Building Board of Appeals.

23.15.1704.1.5 Ad hoc special inspector peer committee

Add a new subsection 1704.5 to read as follows:

An advisory committee of special inspection peers may meet to provide guidance on special inspection matters including but not necessarily limited to, special inspector qualifications, special inspection related code issues, special inspection requirements, remedies to disputes regarding special inspection duties and procedures, and special inspector approval program issues. The Ad Hoc Special Inspection Committee shall be comprised of a balanced membership of peers and shall include a balanced representation of the special inspection profession, design professionals, and public officials. The committee shall meet as required and shall be chaired by the building official or designee. Decisions by the building official may be appealed to the Building Board of Appeals. For a quorum, a peer committee requires attendance of individuals from four (4) businesses performing similar special inspections, and the building official.

23.15.1704.3 Steel construction

Add the following exception under Item 2, to read as follows:

- 2.6. **Welds** listed under exception 2 shall not require Special Inspection if design stresses are less than half of the allowable stresses and welds are placed by AWS certified welders. The Engineer of Record shall indicate on the drawings which welds, if any, do not require Special Inspection.

23.15.1704.3.1 Welding

Add a new paragraph as follows:

For Special Moment-Resisting Frames, the Special Inspector shall be a qualified, AWS Certified Weld Inspector.

23.15.1704.4 Concrete construction

Add the following exception

6. Shotcrete work not of a structural nature or not for water retention structures, fully supported on earth, for minor repairs or when no special hazard exists and special inspection is waived by the building official.

23.15.1802.1 General

Delete the second sentence and replace with:

The classification and investigation of the soil shall be made by an Alaska registered civil engineer.

23.15.1802.2.3 Groundwater table

Replace the subsection with the following:

Any subsurface soil investigation completed in accordance to this chapter shall identify the location and elevation of any ground water found within the limits explored.

23.15.1802.2.6 Seismic design Category C

Add the following after the paragraph:

- A. Evaluation of liquefaction, slope stability, and surface rupture due to faulting or lateral spreading shall show through historic record, subsurface exploration, and analysis the building site and all natural, permanent cut, fill, or stabilized slopes exhibit an acceptable factor of safety or an acceptable level of risk. It may be necessary to extend the investigation beyond the immediate site boundaries in order to evaluate applicable hazards.
- B. The level of evaluation shall be a function of the Occupancy Category of the structure and its location relative to the mapped Seismically-Induced Ground Failure Zones shown in the *Municipality of Anchorage 1980 Anchorage Coastal Resource Atlas, Volume I*
- C. Liquefaction: The evaluation of liquefaction potential for Occupancy Category I and II structures located in Seismically-Induced Ground Failure Zones 1, 2, or 3 may be based on historic record. The evaluation of liquefaction potential for all Occupancy Category III and IV structures, and for Occupancy Category I and II structures located in Seismically-Induced Ground Failure Zones 4 or 5, shall follow an accepted empirical procedure. The potential for liquefaction and soil strength loss shall be evaluated in terms of peak ground acceleration, earthquake magnitude and duration.
- D. Slope Stability & Lateral Spreading: Evaluations of slope stability and surface rupture due to lateral spreading may be analyzed following one of two methods defined below. All analyses shall consider the potential loss of soil strength due to liquefaction, or due to remolding of sensitive cohesive materials.

Method 1. Pseudo-Static Analysis: Following a Limit-Equilibrium analysis, the building site and all natural, permanent cut, fill, or stabilized slopes shall exhibit a minimum factor of safety of 1.50 under static loading conditions; and a minimum factor of safety of 1.10 for seismic loading conditions, when applying the minimum horizontal inertia force determined by multiplying the acceleration factor in Table 2315.1802.2.6 to the weight of the potential sliding mass.

Method 2. Dynamic Analysis: The stability of the building site and all natural permanent cut, fill or stabilized slopes shall exhibit an acceptable safety factor or magnitude of displacement under seismic loading following a dynamic analysis. Dynamic analyses shall be based on site-specific design ground motions defined in Table 23.15.1802.2.6.

**TABLE 23.15.1802.2.6
Seismic Horizontal Acceleration Factors**

Method of Evaluation	Horizontal Acceleration Coefficient
1. Limit-Equilibrium: Zone ^(a) 1, 2, and 3 Zone ^(a) 4 and 5	0.30 0.20
2. Dynamic Analysis	Peak horizontal acceleration corresponding to a 475-year return period ground motion (in bedrock), as modified for the site conditions (Ref: Sections 1615.1 and 1615.2).

a. Seismically-Induced Ground Failure Zones (Ref: *Municipality of Anchorage 1980 Anchorage Coastal Resource Atlas, Volume I*).

23.15.1802.2.7 Seismic design Category D, E, or F

In Item 2, delete the last two sentences. Delete the Exception.

23.15.1802.2.8 Permafrost

Add a new subsection 1802.2.8 to read as follows:

A subsurface investigation shall be performed to evaluate whether permafrost exists at any building site located within areas delineated on the Mass Wasting map (*Anchorage Coastal Resources Atlas, Volume 1: The Anchorage Bowl, 1980*) as having a high potential for isolated permafrost conditions.

23.15.1802.4.1 Exploratory boring

Amend by replacing “registered design professional” with “Alaska registered Civil Engineer.”

23.15.1802.5 Soil boring and sampling

Amend by replacing “registered design professional” at the end of the first sentence with “Alaska registered Civil Engineer.”

23.15.1802.6 Reports

Amend by adding “by a civil engineer licensed in the State of Alaska” after “shall be submitted.”

Add the following items after item 9:

10. When groundwater is known or suspected to exist within six feet (1.8m) of final grade, the report shall include surface and subsurface drainage recommendations.
11. The report shall address the potential for isolated permafrost. When permafrost is known or suspected to exist within the building site, the report shall include discussion of the potential for thaw or creep settlement and foundation recommendations to mitigate such consequences.
12. The soils report shall provide a summary of the methods, parameters and assumptions used to evaluate the hazards of liquefaction, slope stability, and lateral spreading.

23.15.1803.3 Site grading

Add the following paragraph to the end of the section:

There shall not be an increase in surface drainage to adjacent properties. Approved discharge locations shall include street gutters, drainage easements, ditches or other approved locations. Surface runoff may be retained on site to prevent impacts to neighboring properties.

Add the following paragraph to the end of the section:

Footings drains or sump pumps shall discharge to a ditch or storm sewer for new construction where available. Backup emergency systems may discharge to the surface. Primary systems shall not discharge onto adjacent properties. Where sump pumps or footing drains discharge on the soil surface, the effluent shall be directed toward drainage easements, street gutters, ditches or other approved locations. Effluent may be retained on site to prevent impacts to neighboring properties.

23.15.1803.5 Compacted fill material

Replace “90 percent” in the Exception with “Ninety-five (95) percent”.

23.15.1805.1 General

Add the following at the beginning of the paragraph:

Footings and foundations shall be constructed of masonry, concrete, or treated wood. Footings of concrete and masonry shall be of solid material. Foundations supporting wood shall extend at least six (6) inches above the adjacent grade. Unless other recommendations are provided by a foundation investigation report, footings shall meet the following requirements:

Except for the upper 12 inches, peat or organic silts (Pt. OL, or OH soils - as defined by the Unified Soil Classification System) shall not be used for backfill within eighteen (18) inches of the footing or stem wall.

23.15.1805.2.1 Frost protection

Delete “Except where otherwise protected from frost,” and change “foundation” to “Foundation.”

Replace item 2 with:

2. Designing in accordance with ASCE 32, using a Design Air-Freeze Index (F_{100}) of 3,340 F-Days: or

Add the following at the end of the section:

Minimum footing depths shall be as indicated in Table 23.15.1805.2.1. Footings shall bear on undisturbed natural inorganic soil, or suitably compacted fill.

Cast-in-place concrete piers shall be founded at a depth suitable for structural support or as indicated in Table 23.15.1805.2.1, whichever is greater. Connecting grade beams between piers on perimeter walls of warm buildings shall extend at least thirty-six (36) inches below ground surface and shall be protected from frost heave. The potential for frost heave below grade beams of cold structures shall be accounted for in the design of these elements.

Table 23.15.1805.2.1

Foundation Type	Minimum Footing Depth, Inches ⁶ (mm)	
	Warm Foundation	Cold Foundation ^{3,4}
Perimeter Footing ¹	42 (1067)	60 (1524)
Interior or Interior Isolated Spread Footing ²	8 (203)	60 (1524)
Cast-in-Place Concrete Pier	42 (1067)	120 ⁵ (3048)
Exterior Isolated Foundation	NA	120 ⁵ (3048)

Notes:

1. Dimension indicated is from bottom of footing to adjacent exterior grade. Required depth to bottom of footing within a crawl space shall not be less than eight (8) inches (203 mm). Basements or crawl space walls supporting more than five (5) feet (1524 mm) differential fill on opposite faces shall be restrained as necessary against lateral movement.
2. Dimension indicated is from bottom of footing to nearest adjacent grade.
3. Exterior decks, landings, and platforms not rigidly attached to the building and not greater than thirty (30) inches (702 mm) above grade may bear directly on the ground. Bearing materials shall meet other provisions of this code.
4. The minimum footing depths may not be adequate for frost susceptible soils. Cold footings shall be founded below the frost line, or be protected from freezing with insulation or other appropriate means. In addition, provisions shall be made to resist uplift forces due to frost jacking on the sides of cold foundations.
5. Foundations installed in non-frost-susceptible material may be sixty (60) inches (five feet) (1524 mm).

6. Non-load-bearing site structures not attached to the building, such as fences, light poles, sign posts, shall have a footing depth based on an analysis of the vertical and lateral loads on the structure and the structure's susceptibility to damage from frost action.

23.15.1805.2.4 Footing definitions

Add a new subsection 1805.2.4 as follows:

Warm Foundation: Any foundation where the temperature of the bearing soil is normally maintained above freezing.

Cold Foundation: Any foundation where the temperature of the bearing soil is normally subject to freezing.

23.15.1805.3 Footings on or adjacent to slopes

Add the following paragraph before the first sentence:

When a foundation investigation is required in accordance with section 23.15.1802.2., the minimum building and structure clearances and setbacks shall be as defined in sections 1805.3.1 and 1805.3.2, or fifteen (15) feet (4572 mm) from the surface projection of the most critical theoretical failure plane determined from the slope stability analysis, whichever is greater.

23.15.1805.3.5 Alternate setbacks and clearance

Change "registered design professional" to "civil engineer registered in the State of Alaska."

23.15.1805.4.6 Wood foundations

Add the following to the beginning of the first paragraph:

All footings shall be concrete. All-weather wood foundation systems may only be installed in Type GW, GP, SW, and SP soils unless a complete soils investigation and foundation design, prepared by a civil engineer registered in the State of Alaska, is submitted for approval.

Add a second paragraph as follows:

Hot dipped zinc-coated fasteners may not be used for basement or crawl space construction. Fasteners and anchor bolts used in concrete footings shall be stainless steel. Anchor bolts shall be a minimum ten inch (10") by 5/8-inch nominal diameter embedded at least seven (7) inches (178 mm) into the concrete. Treated wood foundation plates or sills shall be installed in accordance with section 23.15.1805.6.

23.15.1805.5 Foundation walls

Add the following after the paragraph:

Foundation walls in all-weather wood foundation systems shall be restrained at the footing line by the following methods:

1. **Basement.** A four-inch (102 mm) concrete slab either poured against a minimum one-inch (25.4 mm) x four-inch (102 mm) treated wood screed or a four-inch (102 mm) concrete slab poured against a keyway between the studs.
2. **Crawl Space.** A minimum four-inch (102 mm) x four-inch (102 mm) nominal size pressure-treated member installed immediately adjacent to the wall and bolted to the footing with 5/8-inch (15.9 mm) diameter anchor bolts maximum two feet 0 inches (610 mm) on center. The maximum soils height against the wall is three feet 0 inches (914 mm).
Exception: The above need not apply if a suitable alternate design is prepared by a civil engineer registered in the State of Alaska and approved by the building official.

23.15.1805.6 Foundation plate or sill bolting

Add the following at the end of the paragraph:

Foundation plates or sills shall be bolted to the foundation or foundation wall with galvanized steel bolts.

23.15.1806 Retaining wall

Add the following sentence:

A factor of safety of 1.10 may be used for load cases with seismic.

23.15.1807.1 Where required

Add the following sentence at the end of the paragraph:

All crawlspace walls below exterior grade shall be damp-proofed.

23.15.1807.1.3 Ground-water control

Add the following at the end of the paragraph:

The space between the side of a basement excavation and the exterior of a basement wall shall be backfilled for half the height of the excavation with the same material (Type GW, GP, SW, or SP soils) on which the footing is placed.

23.15.1807.2.2 Walls

Add a third paragraph to read as follows:

Approved damp-proofing shall be applied over the below-grade portion of exterior crawl space walls prior to backfilling. A treated lumber or plywood strip shall be attached to the wall to cover the top edge of the approved damp-proofing. The

wood strip shall extend at least two (2) inches (50.8 mm) above and five (5) inches (127 mm) below finish grade level to protect the approved dampproofing from exposure to light and from mechanical damage at or near grade. The joint between the strip and the wall shall be caulked full length prior to fastening the strip to the wall. Alternatively, brick, stucco, or other covering appropriate to the architectural treatment may be used in place of the wood strip. The approved damp-proofing shall extend down to the bottom of the concrete footing.

23.15.1807.3 Waterproofing required

Add the following at the end of the paragraph:

In addition, all exterior below grade walls enclosing habitable spaces shall be waterproofed in accordance with section 1807.3.2.

23.15.1808.2.8.3 Load tests

Delete “registered design professional in the fifth sentence and add “civil engineer registered in the State of Alaska”.

23.15.1808.2.23.2.1 Design details for piers, piles and grade beams

Delete the first two sentences.

23.15.1905.12 Cold weather requirements

Amend by adding the following sentence at the end of Item 1.

For purposes of near freezing weather considerations, 40°F shall be used. The protection shall be capable of maintaining the temperature of the curing concrete at or above the required 50°F for the required time periods mentioned in section 1905.11.

23.15.1907.5.1 Support

Amend by adding a new paragraph to the end of the section to read as follows:

1907.5.1.1 Installation of anchors. Except where approved by the registered design professional, anchors shall be in place prior to placing concrete.

Exception: Anchors having a required embedment length of seven (7) inches or less may be field placed while concrete is in plastic condition.

23.15.2104.6 Installation of anchors

Add a new section 2104.6 to read as follows:

2104.6 Installation of anchors. Anchors shall be in place prior to grouting.

Exception: Anchors having a required embedment of thirteen (13) inches or less may be field placed while grout is in plastic condition.

23.15.2208.1 Storage racks

Add the following exception to 2208.1:

Exception: The building official may waive the design requirement for storage racks less than or equal to eight (8) feet in height.

23.15.2308.9.2.2 Top plates for studs spaced at 24 inches

Delete paragraph in its entirety and substitute the following:

When bearing studs are spaced at 24-inch (610 mm) intervals, joists or trusses shall bear within five inches (127 mm) of the studs beneath or a third plate shall be installed.

23.15.2308.9.8 Pipes in walls

Amend the section by adding a paragraph as follows:

All studs in exterior plumbing walls shall be a minimum six-inch (152 mm) nominal width unless otherwise approved.

23.15 Table 2902.1

Replace the reference to section 410.1 of the International Plumbing Code with the following:

Where water is served in restaurants, drinking fountains shall not be required. In other occupancies where drinking fountains are required, bottle water dispensers shall be permitted to be substituted for the required drinking fountains. Drinking fountains shall not be required in B and S occupancies containing break rooms with sinks.

Replace the reference to section 419.2 of the International Plumbing Code with the following:

Substitutions for water closets. In each bathroom or toilet room, urinals shall not be substituted for more than 67 percent of the required water closets.

Replace the reference to section 411 of the International Plumbing Code with the following:

Waste connections shall not be required for emergency showers and eyewash stations.

23.15.3004.3 Area of vents

Revise the Exception to read as follows:

Exception: The total required vent area shall not be required to be permanently open where all the vent openings automatically open upon detection of smoke in the elevator lobbies or hoistway or upon power failure.

23.15.3005.4 Personnel and material hoists

Add new first sentence to read:

Personnel and material hoists shall meet the requirements of ANSI A10.4.

Add new subsection 3005.4.1 to read:

3005.4.1 Elevators for construction and demolition. All elevators, hoists, and material lifts used for construction to convey personnel and materials for construction and demolition operations shall be required to be certified by either the elevator or lift manufacturer or an independent, NAESA certified elevator inspector at the start of construction, prior to initial use, and each six (6) months thereafter while it remains installed at the project site. Such inspection shall include, but is not be limited to, inspection of the erected frame, the motor, hoist mechanisms, braking mechanism, means of entry and egress, load testing, and governor test. Tests reports and certification letter shall be submitted to the elevator section of the Building Safety Division within 72 hours of completion of the inspection. This requirement shall be retroactive to all permits, started prior to the approval of this code which remain open.

All outstanding non-conformances to ANSI A10.4 shall be corrected, reinspected, and certified before said elevator or hoist is placed in use.

23.15.3006.1 Access

Add new paragraph to read:

Access to elevator machine rooms shall be from the inside of the building or shall be by an enclosed, ventilated, and well lighted passageway protected from the weather. Passageway shall be a minimum of 3'- 6" wide by 6'-8" high, and shall meet the material and construction requirements of this code.

23.15.3006.5 Shunt trip

Delete section 3006.5 "Shunt Trip".

23.15.3007 Elevator sprinkler requirements

Add new section 3007 as follows:

3007 Elevator sprinkler requirements.

3007.1 General requirements. Sprinkler heads and piping shall not be installed in elevator machine rooms.

23.15.CH.34 Existing structures

Delete chapter 34 in its entirety and refer to the International Existing Buildings Code.

23.15 Appendix

Adopt Appendices A, C, G and H.

23.15.H.101.2 Signs exempt from permits

Delete subsection in its entirety and substitute the following:

- A. The following signs shall not require a permit under this chapter. An exemption shall not affect the requirement that a sign be installed and maintained so as to conform with the new requirements of this code and any other applicable law.
 - 1. The changing of the advertising copy or message on a painted or printed sign only. Except for theater marquees or similar signs specifically designed for the use of replaceable copy, electric signs shall not be included in this exemption.
 - 2. Painting, repainting or cleaning of an advertising structure or the changing of advertising copy or message thereon shall not be considered an erection or alteration requiring a sign permit, unless structural change is made.
 - 3. Official signs erected by a federal, state or municipal agency.
 - 4. Signs not exceeding six (6) square feet in area on any one of its faces.
 - 5. Signs affixed to or painted on a currently operable and licensed vehicle.
 - 6. Printed messages carried on any surface not attached to or supported from the ground or from a structure. (OA 88-30S).

23.15.H.101.3 Permits required

Add a new section H.101.3 as follows:

A sign permit shall be required before any sign is erected. No permit shall be issued unless the proposed sign fully conforms to all requirements of this chapter and of Anchorage Municipal Code title 21.

23.15.H.101.4 Application for permit

Add a new section H.101.4 as follows:

- A. An application for a sign permit shall be made in writing on forms prescribed by the building official and shall be complete only if accompanied by:
 - 1. The location by street and number of the proposed sign structure;
 - 2. The name, address, and telephone number of owner of the property on which the sign is to be erected;
 - 3. The name, address, and telephone number of the sign contractor or erector;
 - 4. A drawing to scale showing the design of the sign, including dimensions, sign size, method of attachment, structural specifications,

source of illumination and showing the relationship to any building or structure to which it is or is proposed to be installed or affixed to which it relates;

5. For permanent, freestanding signs only, a plot plan to scale, indicating location of the sign relative to property lines, streets and sidewalks, utility easements, buildings, driveways, parking spaces, existing signs (for B-1 and R-0 zones only), and structures identified by their principal use;
6. For B-1 and R-0 zones only, a list of all existing signs on the property on which the proposed sign is to be erected and a description of the size and square footage of each such existing display surface area; and
7. Such other information as the building official determines is reasonably necessary to an evaluation of the proposed sign's compliance with this code.